17. (Amended) The apparatus of claim 16 wherein the means for determining source keys determines a new source key after the means for comparing source keys has compared the previously determined source key, and wherein the means for determining source keys determines the new source key from a group of source data, the composition of [the] which is determined by whether the previously compared source key matched a reference key.

18. (Amended) A method of creating at a receiving computer a duplicate file that is identical to a source file at a sending computer, the duplicate file being formed in part from data in a reference file located at the [remote] receiving computer and in part from data in the source file transmitted from the sending computer, the computers being connected through a computer data interface, the method comprising the steps of:

(a) dividing the reference file located at the receiving computer into a plurality of data blocks of uniform length and associating with each data block a reference key value determined by the data in that block in accordance with a key defining method; and

(b) identifying blocks of data of the uniform length from the source file, determining source key values in accordance with the key defining method, and comparing the source and reference key values to determine whether blocks of data from the reference file match blocks of data from the source file and, in instances where a match is found between a block of data from each file, sending an indication to the receiving computer to copy the block of data from the reference file into the duplicate file so that the block of data indicated by the match need not be transmitted to the receiving computer, wherein the blocks of data from the source file are sequentially identified and each source block of data includes some of the data from the preceding source block of data if the preceding source block of data did not match a reference block of data.

21. (Amended) A method of creating at a receiving computer a duplicate file that is identical to a source file at a sending computer, the duplicate file being formed in part from data in a reference file located at the [remote] receiving computer and in part from data in the source file transmitted from the sending computer, the computers being connected through a computer data interface, the method comprising the steps of:

(a) dividing the reference file located at the receiving computer into a plurality of data blocks of uniform length and associating each data block with a reference key value determined by the data in that block in accordance with a key defining method;

(b) identifying blocks of data of the uniform length from the source file, determining source key values in accordance with the key defining method, and using the source and reference key values to compare blocks of data from the reference file with blocks of data from the source file;

(c) in instances where a match is found between a block of data from each file, sending an indication of the match to the receiving computer to copy the block of data from the reference file to the duplicate file so that the block of data indicated by the match need not be transmitted to the receiving computer; and

(d) in instances where a match is not found between a block of data from each file, transmitting [less] fewer bytes than the number of bytes in the uniform length from the source file to the receiving computer and adding transmitted bytes to the duplicate file.

22. (Amended) A method of creating at a receiving computer a duplicate file that is identical to a source file at a sending computer, the duplicate file being formed in part from data in a reference file located at the [remote] receiving computer and in part from data in the source file transmitted from the sending computer, the computers being connected through a computer data interface, the method comprising the steps of:

(a) dividing the reference file located at the receiving computer into a plurality of data blocks, each data block having a length of n bytes, and associating each data block with a reference key value determined by the data in that block in accordance with a key defining method;

(b) identifying blocks of data of length n bytes from the source file, determining source key values in accordance with the key defining method, and using the source and reference key values to compare blocks of data from the source file with blocks of data from the reference file to find a match;

(c) in instances where a match is found between a block of data from each file, sending an indication of the match to the receiving computer to copy the block of data from the reference file to the duplicate file so that the block of data indicated by the match need not be transmitted from the [source] sending computer to the receiving computer; and

(d) in instances where a match is not found:

(i) transmitting a subset of [the] an initial block to the receiving computer and adding the subset to the duplicate file;

(ii) identifying from the source file a subsequent block of data of length n bytes comprising the initial block of data, less the transmitted subset, and additional data from the source file; and

(iii) determining for the subsequent block of data a source key, the source key being derived from the source key determined from the initial block of data by removing the contribution from the transmitted subset and incorporating a contribution from the additional data.

25. (Amended) An apparatus for changing data at a receiving unit so that the data at the receiving unit is identical to data at a source unit, comprising:

means for determining using a key defining method an array of reference keys having lengths [of] corresponding to data groups having a uniform length of at 256 bytes and stored at the receiving unit; data transfer means for transmitting the multiple reference keys to the source unit; means for determining using the key defining method source keys corresponding to groups of source data of the uniform length in the source unit; means for comparing the source keys with the multiple reference keys; means for transmitting, when a source key does not match any of the reference keys, less than all the data that is included in the group of source data used to determine the source key; and means for transmitting a control signal from the source unit to the receiving unit when a source key matches a reference key, the control signal causing the receiving unit to use a group of data at the receiving unit corresponding to the matched reference key.

28. (Amended) The method of claim 26 in which, if a match is found in step (d), a new block of data in the source file is defined by the [n bytes] n-bytes immediately following the n-bytes used to form the previous source block of data.

29. (Amended) The method of claim 26 in which the reference keys comprise [and] a first part and a second part, the calculation of each part being independent of the calculation of the other part.

32. (Amended) A method of [making] creating a [first] <u>reference</u> data file at a first location that is identical to a source data file at a second location, the method comprising the steps of:

(a) identifying a reference file at the first location that may have data identical to the data comprising <u>a</u> source data file;

(b) dividing the data comprising the reference file into a plurality of data blocks having n-bytes per block and associating each data block with a reference key value determined by a key defining method;

(c) transmitting the reference key values from the first location to the second location;

(d) identifying an n-byte block of data from the source <u>data</u> file and computing using the key defining method a current value for a source key associated with the identified block of data;

(e) comparing the current value of the source key with each of the reference key values and, if a match is found, (i) transferring an indication of such to the [receiving computer] <u>first location</u>, which adds the matching data from the reference file to [the] <u>a</u> duplicate file, and (ii) repeating step (d); and

(f) if a match was not found in step (e), transferring to the [receiving computer] <u>first location</u> a subset of the n-byte block of data to be added to the duplicate file and repeating step (d).